

WHAT IS CLAIMED IS:

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1. A method for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a mobile station adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested for a cell adjacent to one of the cells in communication with the mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS), the method comprising the steps of:

(a) monitoring a quantity of handoff drops versus a quantity of handoff calls occurring for an initial L_p term;

(b) adjusting the admission threshold according to a result of the initial L_p term monitored in step (a); and

(c) repeating the steps (a) and (b) for a successive L_p term, while changing a value of a second term S_p until the target handoff dropping probability is satisfied during the successive L_p term, which is longer than or equal to the initial L_p term and includes the initial L_p term.

2. The method as claimed in claim 1, wherein step (c) includes

(i) decreasing the admission threshold and increasing the value of the second term S_p when the target handoff dropping probability is not satisfied.

3. The method as claimed in claim 2, wherein the initial L_p term is initially set to be equal to the second term S_p .

4. The method as claimed in claim 3, wherein the value of the successive L_p term is increased in a unit of the value of the initial L_p term.

5. An apparatus for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a mobile station adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested for a cell adjacent to one of the cells in communication with the mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS), the apparatus comprising:

a monitoring block for monitoring the number of handoff drops versus the number of occurred handoff calls for an initial L_p term;

a comparator for comparing a monitoring result with the target handoff dropping probability; and

an adjusting block for adjusting the admission threshold according to a comparison result output from the comparator;

wherein the monitoring block monitors a successive L_p term, while changing a value of a second term S_p until the target handoff dropping probability is satisfied during the second term S_p , which is longer than or equal to the initial L_p term and includes the initial L_p term, the comparator and the adjusting block performing corresponding operations according to the comparison result.

6. The apparatus as claimed in claim 5, wherein the adjusting block decreases the admission threshold and increases the value of the second term S_p , when the target handoff

dropping probability is not satisfied.

7. The apparatus as claimed in claim 6, wherein the initial L_p term is initially set to be equal to the second term S_p .

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8. The apparatus as claimed in claim 7, wherein the value of the second term S_p is increased in a unit of the value of the initial first L_p term.

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9. A method for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a mobile station adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested for a cell adjacent to one of the cells in communication with the mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS), the method comprising the steps of:

10 (b) monitoring the number of handoff drops versus the number of occurred handoff calls for an initial L_p term;

(c) adjusting the admission threshold according to the monitoring result;

(d) transmitting a message for adjusting an admission threshold of the cells adjacent to said one adjacent cell according to adjustment of the admission threshold; and

15 (e) repeating the steps (b) to (d) for a successive L_p term, while changing a value of a second term S_p until the target handoff dropping probability is satisfied during the second term S_p which is longer than or equal to the initial L_p term and includes the initial L_p term.

10. The method as claimed in claim 9, further comprising the step of decreasing the admission threshold and increasing the value of the second term S_p , when the target handoff dropping probability is not satisfied.

5 11. The method as claimed in claim 9, wherein the initial L_p term is initially set to be equal to the second term S_p .

12. The method as claimed in claim 11, wherein the value of the second term S_p is increased in a unit of the value of the initial L_p term.

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13. An apparatus for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a mobile station adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested for a cell adjacent to one of the cells in communication with the mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS), the apparatus comprising:

a monitoring block for monitoring the number of handoff drops versus the number of occurred handoff calls for an initial L_p term;

a comparator for comparing the monitoring result with the target handoff dropping probability;

20 an adjusting block for adjusting the admission threshold according to a comparison result output from the comparator; and

a message transmission block for transmitting a message for adjusting an admission

threshold of the cells adjacent to said one adjacent cell according to an adjustment of the admission threshold;


wherein the monitoring block monitors a successive L_p term, while changing a value of a second term S_p until the target handoff dropping probability is satisfied during the second term S_p , which is longer than or equal to the initial L_p term and includes the initial L_p term, and the comparator, the adjusting block and the message transmission block perform corresponding operations according to the comparison result.

14. The apparatus as claimed in claim 13, wherein the adjusting block decreases the admission threshold and increases the value of the second term S_p , when the target handoff dropping probability is not satisfied.

15. The apparatus as claimed in claim 14, wherein the initial L_p term is initially set to be equal to the second term S_p .

16. The apparatus as claimed in claim 15, wherein the value of the second term S_p is increased in a unit of the value of the initial L_p term.

17. A method for controlling admission of a requested handoff call in a wireless network including a plurality of cells, wherein a mobile station controls admission of the requested handoff call, when a handoff call is requested to one of a plurality of cells adjacent to one of the cells in communication with the mobile station, the method comprising the steps of:


 (a) upon receipt of a new call request to the adjacent cell, comparing a sum of an allocated bandwidth of said adjacent cell and a bandwidth for the requested new call with an admission threshold of said adjacent cell, and determining whether to admit or block the requested new call;

5 (b) monitoring the number of handoff drops versus the number of requested handoff calls for an initial L_p term;

(c) adjusting the admission threshold according to the monitoring result and a target handoff dropping probability for guaranteeing a quality of service (QoS);

10 (d) transmitting a message for adjusting an admission threshold of the cells adjacent to said one adjacent cell according to adjustment of the admission threshold; and

(e) repeating the steps (b) to (d) for a successive L_p term, while changing a value of a second term S_p until a target call blocking probability is satisfied during the second term S_p which is longer than or equal to the initial L_p term and includes the initial L_p term.

15 18. The method as claimed in claim 17, further comprising the step of decreasing the admission threshold and increasing the value of the second term S_p , when the target handoff dropping probability is not satisfied.

20 19. The method as claimed in claim 17, wherein the initial L_p term is initially set to be equal to the second term S_p .

20. The method as claimed in claim 19, wherein the value of the second term S_p

is increased in a unit of the value of the initial L_p term.

21. The method as claimed in claim 17, wherein step (a) comprises the step of determining to admit the requested new call, when the sum is less than or equal to the
5 admission threshold of said adjacent cell.

22. An apparatus for controlling admission of a requested handoff call in a wireless network including a plurality of cells, wherein a mobile station controls admission of the requested handoff call, when a handoff call is requested to one of a plurality of cells
10 adjacent to one of the cells in communication with the mobile station, the method comprising the steps of:

a call admitting/dropping decision block for comparing, upon receipt of a new call request to the adjacent cell, a sum of an allocated bandwidth of said adjacent cell and a bandwidth for the requested new call with an admission threshold of said adjacent cell, and
15 determining whether to admit or block the requested new call;

a monitoring block for monitoring the number of handoff drops versus the number of requested handoff calls for an initial L_p term;

a comparator for comparing the monitoring result with a target handoff dropping probability for guaranteeing a quality of service (QoS);

20 an adjusting block for adjusting the admission threshold according to the comparison result;

a message transmission block for transmitting a message for adjusting an admission

threshold of the cells adjacent to said one adjacent cell according to adjustment of the admission threshold; and

a monitoring block for monitoring a successive L_p term, while changing a value of a second term S_p until a target call blocking probability is satisfied during the second term S_p which is longer than or equal to the initial L_p term and includes the initial L_p term.

23. The apparatus as claimed in claim 22, wherein the adjusting block decreases the admission threshold and increases the value of the second term S_p , when the target handoff dropping probability is not satisfied.

24. The apparatus as claimed in claim 22, wherein the initial L_p term is initially set to be equal to the second term S_p .

25. The apparatus as claimed in claim 24, wherein the value of the second term S_p is increased in a unit of the value of the initial L_p term.

26. The apparatus as claimed in claim 22, wherein the call admitting/dropping decision block determines to admit the requested new call, when the sum is less than or equal to the admission threshold of said adjacent cell.